

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A maneuverable apparatus for remotely applying therapeutic energy to biological tissue comprising:
 - a flexible tubular elongate member having a proximal end, a distal end and a longitudinal lumen extending there between;
 - a tubular deflection member coaxial with the elongate member and extending through the lumen of the flexible tubular elongate member and fixedly attached to said distal end of said elongate member, said deflection member having a proximal end, ~~and a partially cut-away distal end region,~~ and wherein the tubular deflection member is capable of longitudinal manipulation relative to said elongate member; and
 - a conductor extending within said lumen of the elongate member for transmitting energy to said distal end of said elongate member, said conductor having a proximal end and a distal end;
 - wherein application of tension to the proximal end of the deflection member will cause the deflection member to be flexed ~~longitudinally relative to said elongate member,~~ thereby causing said distal end of said elongate member to bend.
2. (Canceled)
3. (Previously Presented) The apparatus of claim 1, further comprising an energy source that is in communication with said proximal end of said conductor and is effective to transmit energy through said conductor, said energy source being selected from the group consisting a light source, a microwave source, a heated liquid source, an ultrasound source, or a direct current energy source.
4. (Original) The apparatus of claim 1, wherein said conductor comprises a fiberoptic wave guide.
5. (Canceled)

6. (Original) The apparatus of claim 1, wherein at least a portion of said deflection member is transparent to light energy.

7. (Original) The apparatus of claim 1, wherein said deflection member is non-uniformly shaped having an hour glass shape from said distal end to said proximal end, said hour glass shape having at least one narrow portion relative to said distal and proximal ends.

8. (Original) The apparatus of claim 7, wherein a narrow portion is positioned between about 0.5 cm and about 10 cm from said distal end of said deflection member.

9. (Previously Presented) The apparatus of claim 1, wherein said deflection member is non-uniformly shaped, having a tapered narrower section in a region at the distal end thereof.

10. (Canceled)

11. (Previously Presented) The apparatus of claim 1, wherein said cut-away region is located between about 0.5 cm to about 5 cm from said distal end of said deflection member.

12. (Original) The apparatus of claim 6, wherein said transparent material is a fluoropolymer.

13. (Original) The apparatus of claim 12, further comprising a layer of reflective material affixed to said distal end of said elongate member.

14. (Original) The apparatus of claim 13, wherein said reflective material is gold.

15. (Original) The apparatus of claim 1, further comprising a second deflection member attached to said distal end of said elongate member, said second deflection member having a proximal end and a distal end.

16. (Previously Presented) The apparatus of claim 15, wherein said second deflection member is adapted to be tensioned longitudinally relative to said elongate member, thereby causing said distal end of said elongate member to bend in a direction opposed to said first deflection member.

17. (Currently Amended) A method for phototherapeutically modulating a target tissue, comprising the steps of:

introducing a flexible tubular elongate member into a predetermined tissue site, said flexible tubular elongate member having a proximal end, a distal end and a longitudinal lumen extending therebetween, and a tubular deflection member coaxial with the elongate member and extending through the lumen of the flexible tubular elongate member and fixedly attached to said distal end of said elongate member, said deflection member having a proximal end, ~~and a partially cut-away distal end region,~~ and wherein the tubular deflection member is capable of longitudinal manipulation relative to said elongate member;

applying tension to the proximal end of the deflection member such that the deflection member will be flexed ~~longitudinally relative to said elongate member,~~ thereby causing said distal end of said elongate member to bend;

positioning a slidable conductor through said lumen of the elongate member proximate to said tissue site; and

transmitting energy to said distal end of said elongate member through said conductor, such that said target tissue is ablated, coagulated or phototherapeutically modulated without damaging surrounding tissue.

18. (Previously Presented) The method of claim 17, wherein said flexible elongate member is transparent and energy is transmitted through the transparent flexible elongate member.

19. (Original) The method of claim 17, wherein said energy is laser light.

20. (Original) The method of claim 17, wherein said conductor is repeatedly advanced through said lumen.

21. (Currently Amended) A method for treating trabecular tissue, comprising the steps of:

introducing a flexible tubular elongate member proximate to trabecular tissue, said flexible tubular elongate member having a proximal end, a distal end and a longitudinal lumen extending therebetween, and a tubular deflection member coaxial with the elongate member and extending through the lumen of the flexible tubular elongate member and fixedly

attached to said distal end of said elongate member, said deflection member having a proximal end, ~~and a partially cut-away distal end region,~~ and wherein the tubular deflection member is capable of longitudinal manipulation relative to said elongate member;

applying tension to the proximal end of the deflection member such that the deflection member will be flexed ~~longitudinally relative to said elongate member,~~ thereby causing said distal end of said elongate member to bend;

positioning a slidable conductor through said lumen of the elongate member proximate to said trabecular tissue site; and

transmitting energy to said distal end of said elongate member through said conductor, such that said trabecular tissue is phototherapeutically modulated without damaging surrounding tissue.

22. (Currently Amended) A method for treating or preventing atrial fibrillation by ablation, coagulation or phototherapeutic processes, comprising the steps of:

introducing a flexible tubular elongate member proximate to atrial tissue, said flexible tubular elongate member having a proximal end, a distal end and a longitudinal lumen extending therebetween, and a tubular deflection member coaxial with the elongate member and extending through the lumen of the flexible tubular elongate member and fixedly attached to said distal end of said elongate member, said deflection member having a proximal end, ~~and a partially cut-away distal end region,~~ and wherein the tubular deflection member is capable of longitudinal manipulation relative to said elongate member;

applying tension to the proximal end of the deflection member such that the deflection member will be flexed ~~longitudinally relative to said elongate member,~~ thereby causing said distal end of said elongate member to bend;

positioning a slidable conductor through said lumen of the elongate member proximate to said atrial tissue site; and

transmitting energy to said distal end of said elongate member through said conductor, such that said atrial target tissue is ablated, coagulated or phototherapeutically modulated without damaging surrounding tissue, thereby treating or preventing atrial fibrillation.

23. (Currently Amended) A maneuverable apparatus for remotely applying therapeutic energy to biological tissue comprising:

a flexible tubular elongate member having a proximal end, a distal end and a longitudinal lumen extending there between;

a tubular deflection member coaxial with the elongate member and extending through the lumen of the flexible tubular elongate member and fixedly attached to said distal end of said elongate member, said deflection member having a proximal end, ~~and a partially cut-away distal end region,~~ and wherein the tubular deflection member is capable of longitudinal manipulation relative to said elongate member;

a conductor extending within said lumen of the elongate member for transmitting energy to said distal end of said elongate member, said conductor having a proximal end and a distal end;

a reflectance sensor for measuring intensity of light reflected from said tissue while illuminating said tissue;

a monitor connected to said reflectance sensor for monitoring changes in the intensity of light reflected from said tissue;

an analyzer connected to said monitor for determining the degree of therapeutic treatment based upon said monitored changes in said tissue; and

a controller connected to said analyzer and laser for controlling the output of said laser in response to said reflected light from said treated tissue,

wherein application of tension to the proximal end of the deflection member will cause the deflection member to be flexed ~~longitudinally relative to said elongate member,~~ thereby causing said distal end of said elongate member to bend.

24. (Currently Amended) A method for treating or preventing atrial fibrillation by ablation, coagulation or phototherapeutic processes, comprising the steps of:

introducing a flexible tubular elongate member proximate to atrial tissue, said flexible tubular elongate member having a proximal end, a distal end and a longitudinal lumen extending therebetween, and a tubular deflection member coaxial with the elongate member and extending through the lumen of the flexible tubular elongate member and fixedly attached to said distal end of said elongate member, said deflection member having a proximal end, ~~and a partially cut-away distal end region,~~ and wherein the tubular deflection member is capable of longitudinal manipulation relative to said elongate member;

applying tension to the proximal end of said deflection member such that the deflection member will be flexed ~~longitudinally relative to said elongate member~~, thereby causing said distal end of said elongate member to bend;

positioning a slidable conductor through said lumen of the elongate member proximate to said atrial tissue site;

transmitting laser energy to said distal end of said elongate member through said conductor;

measuring the intensity of light reflected from said target tissue; and

controlling the energy applied to said site in response to monitored changes in the intensity of said light reflected from said target tissue, thereby treating or preventing atrial fibrillation.

25. (Previously Presented) A maneuverable apparatus for remotely applying therapeutic energy to biological tissue, comprising:

a flexible tubular elongate member having a proximal end, a distal end and a longitudinal lumen extending therebetween; and

a tubular deflection member coaxial with the elongate member and extending through the lumen of the flexible tubular elongate member and fixedly attached to the distal end of the elongate member, the deflection member having a proximal end, and a partially cut-away distal end region having a helical shape,

wherein application of tension to the proximal end of the deflection member will cause the deflection member to be flexed longitudinally and rotated relative to a longitudinal axis, thereby causing the distal end of the elongate member to bend in a non-planar direction.